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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,929	12/13/2001	Katrina G. Desroches	PGI6044P0271US	2205
32116	7590	05/18/2006	EXAMINER	
WOOD, PHILLIPS, KATZ, CLARK & MORTIMER 500 W. MADISON STREET SUITE 3800 CHICAGO, IL 60661			TORRES VELAZQUEZ, NORCA LIZ	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/021,929

Applicant(s)

DESROCHES ET AL.

Examiner

Norca L. Torres-Velazquez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 15 and 19-22 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12, 15 and 19-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's amendment and arguments filed March 01, 2006 have been fully considered but they are not persuasive.

a. Applicants have amended independent claim 12 to now include the limitation that the heat activated binder component is provided by one polymer component of heat activated binder fibers having plural polymer components and have deleted the term "pre-form" and substituted it for - - mat - -.

No new matter has been introduced by the amendment. It is noted that the prior art of WEINLE discloses the use of bicomponent binder fibers that reads on the newly added limitation. Further, FRANK '580 teaches that bicomponent fibers may be utilized as both first and second fibers. (Col. 3, lines 65-66) With regards to the stiffness performance limitation in the last paragraph of claim 12, it is noted that such limitation does not have an effect on the final product of the present invention as the limitation is relative to the stiffness of an intermediate product that is not claimed. Therefore, it is not known what is the final stiffness of the product.

b. Applicant's submitted Declaration of Ms. Gale Shipley pursuant of 37 C.F.R. 1.132 and the samples submitted have been considered. However, the Declaration is not commensurate in scope with the claims. In the Declaration Ms. Shipley indicated that the product of FRANK or the product of WEINLE et al. in view of FRANK is different from the claimed product as the presently claimed product utilizes less than about 40 percent low melt binder polymer. Such limitation is not in the claims. With regards to the

sample products included, it is noted that the present claims are not claiming the stiffness performance nor the rigidity of the final product. It is the Examiner's position that the molded construct of FRANK would inherently possess stiffness.

With regards to the argued "thermal history", it is the Examiner's position that the prior art of record as stated in previous office actions meet all the structural limitations of the present invention and provide similar processes that have been equated to those of the present invention. The claims are not defining the argued structure with a particular percentage of low melt binder polymer or a particular basis weight.

Claim Rejections - 35 USC § 102/103

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

- The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 12, 15 and 19-22 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over FRANK (US 5,492,580).**

FRANK relates to nonwoven composite materials adapted for thermoforming that have enhanced stiffness/weight ratios and enhanced resistance to shrinkage during thermoforming. (Col. 1, lines 10-16). The reference teaches the use of the nonwoven composite materials in

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applications such as trunk liners, dash panel or any other type of part. (Col. 1, line 29; Col. 2, line 19). The shaped nonwoven molded composite material is made by forming a batt of thermoplastic fibers that includes first fibers and second fibers with the second fibers having a melting point lower than that of the first fibers. The batt is needle punched or stitch bonded into a nonwoven porous consolidated structure, and then the structure is heated to a temperature below the melting point of the first fibers and above the melting point of the second thermoplastic fibers. The structure is compressed and cooled to form a moldable composite material having substantially reduced air voids. Then the moldable composite material is thermoform molded into a shaped nonwoven molded composite material. (Refer to claim 1) FRANK also teaches that bicomponent fibers may be utilized as both first and second fibers. (Col. 3, lines 65-66)

It is the Examiner's interpretation that the second thermoplastic fibers of the reference equate to the heat activated binder component of the fibrous mat of the present invention and that the thermoform molding step of the reference equate to the step to form the final molded construct of the present invention. The moldable composite material is equated to the presently claimed "incubated and cooled fibrous mat".

With regards to the stiffness performance limitation in the last paragraph of claim 12, it is noted that such limitation does not have an effect on the final product of the present invention as the limitation is relative to the stiffness of an intermediate product that is not claimed. Therefore, it is the Examiner's position that the molded construct of FRANK would inherently possess stiffness.

The burden is upon Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed property of a greater stiffness performance of at least 15% is relative to an intermediate product not claimed and has no effect on the final product. Therefore, a final product with stiffness would obviously have been present once the FRANK product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977) as to the providing of this rejection made above under 35 USC 102.

4. Claims 12, 15 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over WEINLE et al. (US 4,840,832) in view of FRANK (US 5,492,580).

WEINLE et al. discloses a textile-based product for use as a headliner that is formed from a batt of polymeric fibers compressed and molded into the desired headliner shape. (Column 1, lines 67-68 through Column 2, lines 1-2) The polymeric fibers of the batt preferably include potentially adhesive binder fibers which are thermally activated during the molding of the batt to bond together the fibers of the batt at their crossover points, thereby maintaining the batt in its molded shape while providing resiliency and flexibility to the batt. The reference teaches the use of bicomponent fibers having a relatively low melting polymer binder component and a higher melting polymer strength component as binder fibers. (Column 2, lines 9-17) The reference teaches the use of a sheath-core bicomponent construction wherein the core is formed of a relatively high melting polyethylene terephthalate (PET) polymer and the sheath comprises a PET copolymer having a much lower melting temperature and which exhibits thermoplastic adhesive and thermoformability properties when heated to a temperature of about 170 to 200 degree C. (Column 4, lines 24-31) WEINLE et al. further teaches the use of staple length fibers. (Column 4, lines 50-51) WEINLE et al. also teaches applying heat at a temperature and

for a time sufficient to activate the potentially adhesive characteristics of the thermoplastic binder fibers, molding and cooling the batt. (Column 5, lines 65 through Column 6, lines 1-5)

The reference further teaches the steps involved in producing the nonwoven batt that involves blending the textile staple fibers, than formed into a web by air-laying, garneting or carding, the web may be crosslapped, optionally needled to form a coherent self-sustaining batt or alternatively, heat stabilized. (Refer to Column 5, lines 45-62). It is further noted that the WEINLE et al. reference teaches the use of those materials described by Applicants in the Specification. (i.e. staple length fibers, sheath-core bicomponent fibers with a polyester core component and a co-polyester sheath component as a binder fiber, mechanical entanglement for pre-consolidation).

While WEINLE et al. teaches that the web may be heat stabilized by passing heated air or steam through the batt, it fails to expressly disclose that the temperature at which is heated is the activation temperature of the binder component and that then it is cooled.

FRANK relates to nonwoven composite materials adapted for thermoforming that have enhanced stiffness/weight ratios and enhanced resistance to shrinkage during thermoforming. (Col. 1, lines 10-16). The shaped nonwoven molded composite material is made by forming a batt of thermoplastic fibers that includes first fibers and second fibers with the second fibers having a melting point lower than that of the first fibers. The batt is needle punched or stitch bonded into a nonwoven porous consolidated structure, and then the structure is heated to a temperature below the melting point of the first fibers and above the melting point of the second thermoplastic fibers. The structure is compressed and cooled to form a moldable composite

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material having substantially reduced air voids. Then the moldable composite material is thermoform molded into a shaped nonwoven molded composite material. (Refer to claim 1)

Since both references are directed to molded materials, the purpose disclosed by FRANK would have been recognized in the pertinent art of WEINLE.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify web of WEINLE and provide with a heat stabilizing step in which the structure is heating to activate the binder component and then cooling it prior to thermoform molding it with the motivation of producing a material that is resistant to shrinkage when subjected to subsequent thermoform molding and that has enhanced stiffness as disclosed by FRANK. (Refer to Claim 1 and Col. 1, line 15)

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

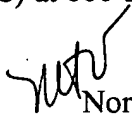
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Norca L. Torres-Velazquez whose telephone number is 571-272-1484. The examiner can normally be reached on Monday-Thursday 8:00-5:00 pm and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Norca L. Torres-Velazquez
Primary Examiner
Art Unit 1771

May 12, 2006